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08: Technical Editing

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Technical Editing

Jonathan Arnett

Chapter Objectives

Upon completion of this chapter, readers will be able to:

1. Explain the general procedure for technical editing.
2. Explain the different levels of edit.
3. Explain the purposes of style guides and style sheets.
4. Use copyediting symbols appropriately.
5. Use proofreading symbols appropriately.

This chapter focuses on editing technical documents. In particular, this chapter will address some of the most common types of technical editing you can do, as well as processes, resources, and techniques you can use.

- Overview of technical editing
- General procedure for editing
- Contracts
- Levels of edit
- Editors' resources
- Strategies for writing comments
- Strategies for marking up technical materials
- Hard-copy editing marks
- Special ideas for editing visual materials
- Special ideas for editing websites

Overview of technical editing

You may find that technical editing is very different from what you expect. When people hear the word "edit," they think of rewriting an author's words; working with authors on issues such as character plot, and storyline; suggesting the most appropriate word in order to make a manuscript "sing." That's not technical editing.

Instead, technical editing is a highly rhetorical, detail-oriented process of ensuring that specialized information appears so that it is appropriate for end users, and technical editors make informed, thoughtful suggestions for improvement toward that purpose.

Technical editing is a collaborative process with authors, who are often subject-matter experts (SMEs, pronounced "smees"), to check correctness of such things as chemical formulas, specialized terminology, equations, and matchups between textual and visual elements, as well as more traditional aspects of writing.

Technical editing is a recursive process, not a one-and-done routine. Technical editors often review the same materials multiple times and have their edits reviewed before the materials are printed or posted online. Only rarely will technical editors make changes and then publish the materials immediately.

Technical editing covers a surprisingly wide variety of subjects, contexts, and materials. Job ads for technical editors seek people who can comment on—and create new—paper documents, electronic documents, images, visual designs, websites, audio and video files, and multimedia presentations, just to name a few examples.

This chapter will focus on editing text on hard copy, soft copy, and websites, but it will also provide you with concepts and techniques that you can use in graphics-heavy and multimedia editing tasks.

General procedure for editing

The way you go about editing technical materials will depend on multiple factors. You will need to consider the artifact you are editing—is it mostly text? does it contain visuals? is it mostly visuals? is it paper-based or in electronic format? does it contain multimedia content? is it static or interactive?—and the type of edits that you are responsible for making. Even so, you can use the same general strategy when approaching most technical editing projects:

1. Analyze the materials' purpose, audience, format, and uses.
2. Evaluate the materials to see if they fit. In particular, consider the materials'
 - contents — completeness; appropriateness
 - organization — order of contents; signals about order
 - visual design — text; lists; tables; aesthetic appearance
 - navigability — findable, working hyperlinks; section breaks
 - style — writing style; authorial persona; sentence structures; cultural biases; grammar; mechanics
 - illustrations — type; construction; placement
 - accessibility — ADA compliance
3. Set up objectives and plan your project's sequence.
4. Review the plan with the author.
5. Edit the materials.
6. Evaluate the outcome.

Editor-Client Contracts

Sometimes, you and the technical materials' creator will work inside the same organization. In this case, your job title and job description likely already define your relationship with the creator, and both you and the creator will have set responsibilities and deadlines.

Other times, you may be editing materials for a client, a person who is not your coworker. In this case, you need to write a contract that defines your professional relationship with your client.

At the least, a contract should specify

- the type of materials you will edit
- the number of items
- the length (or size) of the materials
- the format of the materials
- the level of edit
- the deliverable (what you will return to your client)
- a schedule for completion
- your compensation

A clearly written contract benefits both yourself and your client. You will not be overworked or underpaid, and both you and your client will know what to expect and when to expect it.

As a general rule of thumb, if you are an inexperienced editor, double your estimate of how long it will take you to edit a project, and charge a per-hour or per-page rate. Once you are more experienced and know how quickly you can actually edit, you can charge a per-project flat fee.

Levels of edit

When you begin an editing project, avoid the temptation of diving in and making any-and-all changes that you think will be valuable. Instead, find out what "level of edit" you need to perform, and stick to it.

A "level of edit" defines how "deep" you should go with your edits. Levels range from superficial to extremely deep. Many different levels of edit can exist; experts disagree about how many levels of edit are necessary and what the different levels should involve, and some types of materials may not require specific levels of edit. Even so, you can use three basic levels for most technical editing projects:

- **Consistency and correctness.** Edit for surface-level issues such as spelling, punctuation, grammar, word use, page numbering, cross-references, and color consistency. Changes from these edits will not deeply impact the document as a whole.
- **Visual readability.** Edit for substantive issues such as typeface choices and consistency; graphic elements' locations, sizes, labels, and captions; and document layout. Changes from these edits may have ripple effects across a document and create new errors with consistency and correctness.
- **Content and structure.** Edit for deep issues such as internal organization, sentence structures, logical flaws, image appropriateness, and overall meaning. Changes from these edits often require fundamental changes in the document and may create entirely new problems with other levels of edit.

When you edit any technical materials, do multiple passes through the material, moving from the deepest to the most superficial level of edit. That way, you will avoid wasting your time on marking up or correcting surface-level problems that will be deleted anyway.

If you see a problem that is outside your responsibility as an editor—for example, if you see a logical problem but you're only responsible for fixing comma splices—note the issue and contact someone with the authority to correct the problem.

Editors' resources

When you edit technical materials, consult a style guide or style sheet, and create a style sheet of your own.

Style guides

A style guide is an existing, authoritative source that lays out rules for the materials you are editing. For example, you have almost definitely used a dictionary at some point in your life, and if you have taken a first-year composition course, you have used a writer's handbook. Both of these examples are style guides.

Many technical editors use their employers' own in-house style guides, but many technical editors also use commercially-available style guides. Some that are commonly used in technical communication include *Scientific Style and Format: The CSE Manual for Authors, Editors, and Publishers*, the *APA Publication Manual*, and the *Chicago Manual of Style*.

Specialized style guides for highly technical subject matter also exist. If you are editing materials that require specialized knowledge, consult an appropriate style guide. For example, if you're editing documentation for factory-control equipment that will be exported to Russia, refer to *The English-Russian Dictionary of Mechanical Engineering and Industrial Automation*.

Always be prepared to justify your edits with a style guide reference. If you make up your own rules or follow your gut instinct instead of following a style guide, your author may reject your edits, or worse, you may introduce new errors.

Style sheets

Style sheets are small-scale, local style guides that provide consistent, quick-reference answers to common problems. Technical editors often develop style sheets to cover separate-but-related projects or different phases of a major project, and to make sure that all the editors on a project are following the same rules.

You should compile your own style sheet every time you edit anything. Do not simply list every error you encounter. Instead, list recurring errors or problems with answers that you need to look up frequently, and alphabetize the contents to make them easy to navigate. [Click here for an example style sheet](#)

Strategies for writing comments

When you edit technical materials, do not simply insert corrections unless the edits are simple or you have explicit permission to make final decisions. Instead, write comments to the author and suggest changes.

Before you write the comments, analyze the person you're writing to. Who is the author that created the materials you are editing? How will this person react to your comments? People are often very sensitive to criticism of their writing.

When you write the comments, actively think about the words and sentence structures that you use. Some authors are more open to criticism than others, but even receptive authors will ignore weak comments and balk at rudely stated commands.

Write your editorial comments using the strategies that Mackiewicz and Riley (2003) suggest:

- **Opinion**
 - *"I would use Verdana for the document's typeface."*
 - State your opinion if you mean the author should make a change.
- **Suggestion with an active modal verb**
 - *"You should probably use Verdana as the document's typeface. It'll make the text more readable onscreen."*
 - Combine a strong suggestion with "should," "will," or "ought" if you mean the author should make a change. You can include a "downgrader" such as "probably" to soften the tone. You can, but don't have to, explain the payoff.
- **Command**
 - *"Use Verdana as the document's typeface, please. It'll make the text more readable onscreen."*
 - Issue a command if you mean the author should make a change. You can include a "downgrader" to soften the tone. You can, but don't have to, explain the payoff.
- **Possibility statement with an active verb**

- *"You could use Verdana as the document's typeface. That's just an idea. It would make the text more readable onscreen."*
- Make a suggestion with "can" or "could" if you are suggesting a non-mandatory option. You might also state the payoff.
- **Question**
 - *"Could you change the document's typeface to Verdana?"*
 - Ask a question only if you don't know the answer. Otherwise, avoid this strategy.
- **Suggestion with a passive voice modal verb**
 - *"The document's typeface should be changed to Verdana."*
 - Avoid this strategy.
- **Possibility statement with a passive voice modal verb**
 - *"The document's typeface could be changed to Verdana."*
 - Avoid this strategy.
- **Hint**
 - *"Using a sans serif font for a document that will appear onscreen increases the document's readability."*
 - Avoid this strategy.

Strategies for marking up technical materials

When you edit technical materials, your specific actions will depend on the type of editing and the materials' format.

Copyediting vs. Proofreading

Technical editors help develop technical communication artifacts as well as review them just before they are published. Before you begin editing, make sure you know which approach you should take.

Editing during the developmental phase is called **copyediting**. This type of editing may involve "shaping" the document through deep edits and multiple comments to the materials' author. Documents that are being copyedited in hard copy are often (but not always) double-spaced.

Editing during the pre-production phase is called **proofreading**. Ideally, proofreading should only require a superficial level of edit because it requires an editor to look for differences between the approved "dead copy" that has been edited multiple times and the first printed proof version—the "galley"—that will be reproduced and published. Documents that are being proofread in hard copy (on paper) are almost always single-spaced.

Procedural markup vs. Structural markup

Technical editors use different types of markup on text that depend on the editing goals and the edited materials' format. These approaches are complementary, not opposite.

Procedural markup involves going through a document and marking specific changes. A common example is correcting misspelled words or deleting blank spaces. You may also use procedural markup to provide instructions for changing a document's layout and design.

Structural markup involves "tagging" sections of a document to indicate they belong to specific categories. It is akin to using the Styles function of MS Word.

You can also combine the two approaches by using procedural markup to indicate textual changes and structural markup to indicate formatting changes.

Times
12/14
FL RR

in one package, several areas of technical communication and rhetoric of science that are addressed separately in the present scholarship. The theoretical cornerstones of this project will be Habermas's concept of the ideal speech communication situation and pragma-dialectic argumentation.

Ideal Speech Communication Situation *Trebuchet 14 bf*

Times
12/14
FL RR

Habermas's ideal speech communication situation is strongly analogous to how scientific discourse is supposed to work; i.e., an unconstrained dialectic interchange among members of an intellectual community, oriented toward finding truth. In Habermas's terms, the ideal speech communication situation depends on communicative action that is free from strategic action and takes place in the public sphere, which is part of the lifeworld. In the paragraphs below, I define each of these terms and briefly explain how I will use them in my ^sdisertation analysis.

Communicative Action *Trebuchet 13 bf ital*

Times
12/14
FL RR

Communicative action can be thought of as the instantiation of critical discourse within the public sphere. Dayton (2002) describes it as "communication aimed at coming to an understanding with others, the primordial form of human communication from which all other forms are derived" (p. 365). In order to qualify as communicative action, though, Habermas provides four criteria—Comprehensibility, Truthfulness, Sincerity, and Legitimacy—that must be fulfilled.

I have reproduced, in rough form, a chart for applying these four principles:

Trebuchet 10
centered
ital
bfTrebuchet
10/12
FL RR
lf

<i>Norms of Practical Communication</i>	<i>Comprehensibility</i>	<i>Truth</i>	<i>Sincerity</i>	<i>Legitimacy</i>
Corresponding questions	"What's this mean?"	"Is this true?"	"Can we trust?"	"Is this justified?"
Evidence of systematically distorted communication	Public exclusion by jargon	Information withheld; responsibility obscured; need misrepresented	Rhetorical reassurances; expression of false concern; hiding motives	Unresponsiveness; assertion of rationalizations; professional dominance
Suggestions for preventing distortions	Minimizing jargon; creating public review committees	Utilizing independent/critical third-party expertise	Organizing counteradvocates; checking with contacts, networks	Making decisions participatory; checking with affected persons

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Communicative Action

Communicative action can be thought of as the instantiation of critical discourse within the public sphere. Dayton (2002) describes it as "communication aimed at an understanding with others, the primordial form of human communication for the development of rationality" (p. 365). In order to qualify as communicative action, that action must be characterized by Comprehensibility, Truthfulness, Sincerity, and Legitimacy.

I have reproduced, in rough form, a chart for applying these norms.

Norms of Practical Communication		
Communication	Comprehensibility	Truthfulness
Corresponding questions	"What's this mean?"	"Is this true?"
Evidence of systematically distorted communication	Public exclusion by jargon	Inferential wit and reason
Suggestions for preventing distortions	Minimizing jargon; creating public review committees	

P - Times New Roman
12/14 FL RR

H3 - Trebuchet 14 bold

H4 - Trebuchet 14 bold

TH - Trebuchet 13 bold italic
centered

TB - Trebuchet 10/12 FL RR
lightface

HR - Trebuchet 10 FR

Hard copy materials

It is becoming less and less common for editors to work in hard copy (on paper), but it still happens. You may find that editing on paper is easier on your eyes, or that until you learn how to use a program's editing tools, editing on paper may be faster.

If you do choose to print out and mark up technical materials, you should follow a few standard procedures.

- Mark changes to text inside each page's main body. (Except if you're proofreading. In that case, mark changes in the margins.)
- Mark changes to layout in the margins.
- Write comments to the author in the margins, and label them as comments. "AU:" is a common label.

- Circle any marginal notes that are instructions.
- Use standard marks that other people will understand, not your own made-up marks.
- Choose the simplest markup.
- Clarify potentially ambiguous marks. (For example, if you insert a lower-case letter L, write it in cursive, and/or circle the letters "el" next to it.)

Ambiguous Markup Example

In each of the sentences below, a copyeditor will insert missing letters that can be misinterpreted as numbers.

Example #1 – Just the handwritten letter

In this paper, you wil^l read more about a particular aspect of quantitative methds.^o

Example #2 – The handwritten letter in cursive

In this paper, you wil^l read more about a particular aspect of quantitative methds.^o

Example #3 – The handwritten letter, plus circled clarification

In this paper, you wil^l read more about a particular aspect of quantitative methds.^o

Example #4 – The handwritten letter in cursive, plus circled clarification

In this paper, you wil^l read more about a particular aspect of quantitative methds.^o

- Be consistent, and mark every instance of an error.
- Use a bright-colored (not blue or black) pen or pencil, with a medium tip.
- Erase all stray marks. They can be misinterpreted as instructions to make changes.
- Be neat. Scribbles, squiggles, and smears will only confuse the author and/or your fellow editors, and you may cover up important items.
- If you use structural markup, provide a legend that specifies each tag's formatting requirements.

Soft copy materials

More and more often, technical editors work in soft copy (on a computer). Doing so lets you avoid double-handling documents, erase mistakes, revise comments and markup, track versions easily, and automate repetitive tasks.

If you edit in soft copy, you should follow slightly different standard procedures:

- Use programs' built-in tools to write comments to authors.
 - On MS Word, highlight text and click **Insert > Comment**.
 - On Acrobat or Acrobat Reader, use the **Comment** menu. Click in the document and use the "Add sticky note" function, or highlight text and click "Add note to text."
- If you edit text on a word processor (for example, MS Word), activate the program's change-tracker and actually make changes. Don't just mark problems.
- If you edit text on a layout program (for example, InDesign) or a PDF handler (for example Acrobat or Acrobat Reader), mark up the document using the program's built-in commenting tools. Then, revise the text in a word processor and re-create the document.
- Apply structural markup instead of just marking for it. Use document templates, high-level formatting tools (such as MS Word Styles), and/or tagging languages (such as HTML or XML).

- Use find-and-replace tools to fix repeated errors.
- Use accept/reject functions to incorporate or reject changes and delete editors' comments.
- Toggle between viewing the edited document with markup and the document without markup. Without the change-tracker's highlighting, you may see new problems "hiding" in plain sight.













Hard copy editing marks

Editors in many disciplines use two fairly standard sets of marks that you can use to tag hard copy documents. One set is specifically for **copyediting**; it assumes that the edited document will be double-spaced, with lots of room between the lines for an editor's scribbling. The other set is specifically for **proofreading**; it assumes that the edited document will be single-spaced.













There is some crossover between copyediting marks and proofreading marks, but they are not interchangeable. Keep them separate.

Copyediting Symbols

Copyediting Symbols

	delete	I love ed ding !
	delete, close up	I also love proof reading !
	replace letter	Melinda went into a t r ence.
	delete word	It's in the the back yard.
	insert	My ^{te} lephone kept ringing all night.
	insert space	Why won't he go away?
	insert space	The graffiti letters were unreadable.
	transpose	You should tra ^{ns} pose the letters.
	close up space	Eliminate the ext ^{ra} space.
	capitalize	<u>john</u> works at the <u>ibm</u> factory in <u>ohio</u> .
	small caps	The alarm rang at 6 <u>a.m.</u>
	lower case	It's not a <u>F</u> ederal case.

Copyediting Symbols

	lower case, all	Who keeps capitalizing FEDERAL ?
	initial cap only	Fred attended the IRON MAIDEN concert.
	change to italic	I saw Star Wars the year it debuted, in 1977.
	change to roman	Of course, I was only four years old .
	boldface	Click the Enter key and wait ten seconds.
	superscript	Chuck wrote E=mc ² on the textbook's cover.
	subscript	It's a very bad idea to drink H ₂ O 2 .
	delete underline	Nobody, and I mean nobody , likes cold feet.
	spell out	The man signed his order in ASL .
	change to numeral	Cool Hand Luke ate 50 eggs in an hour.
	ignore the edit	The editor made a mistake.
	ignore the edit	The editor blew it twice in a row.













Copyediting Symbols

	period	Give me a Coke, please
	comma	What's up Charley?
	colon	Ashley gave the correct answer
	semicolon	I love cheese; however, it doesn't love me.
	parentheses	She said, "No. I don't like it"
	brackets	The sign said, "We bye
	hyphen	The nightlight uses a light
	hyphen	The nightlight uses a light
	hyphen	The nightlight uses a light
	em-dash	It's an ugly word
	en-dash	Read pages 42
	equal sign	Yes, the answer is

Copyediting Symbols

	paragraph break	She liked it. Zhaleh raced out the door.
	line break	Poetry often uses line breaks inside sentences.
	run together	You've gotta be crazy if you think I'm going to eat fricasseed squirrel.
	set as a paragraph, not as a list	Elise bought many kinds of books, including <ul style="list-style-type: none"> paperbacks hardbacks ebooks
	justify left	Why is this line indented?
	justify right	Align this text to the right margin.
	center	This line should be centered.
	ragged right	Full-justified text can look peculiar, especially when "lakes" and "rivers" of white form in its middle, or the words' spacing gets stretched, as is happening in this short paragraph. See?.
	align	No way, man. I don't follow your silly rules. Free spirits like me...we just gotta be free.

Copyediting Symbols

	align	This should be fun. I'm going to align every line behind the first letter "e." Why? Because I can. Note the top and bottom vertical lines.
	indent one em	 You need to indent this line just a tad more.
 or 	indent two ems	 Indent this line twice as much.
	indent all text by two ems	 There is no need to update your information with any merchants who automatically bill to your account.
	transpose words	What is going the heck on here?
	close up vertical space	Charley started typing his paper at noon yesterday and has already hit a thousand pages. I'm worried about him.
	insert vertical space between lines	Famous Movie Villains  Darth Vader is one of the most iconic baddies in the history of cinema.

Copyediting Symbols Practice

Match the symbol to its meaning (punctuation)

Match the symbol to its meaning (words & letters 1)

Match the symbol to its meaning (words & letters 2)

Match the symbol to its meaning (alignment & spacing)

Match the symbol to its meaning (spacing & positioning)

Extra practice 1

Extra practice 2

Proofreading Symbols

Proofreading Symbols

Special Rules for Proofreading

Put marks in both the margin and in the text.
















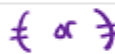



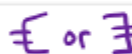




















If there is more than one error on a line, list them in order, and put slashes between their marks.

margin mark	in-text mark			
		delete		Deleteing extra letters is easy.
		delete, close up		Free way is one word, not two.
		replace letter		Melinda was a Ghostbust r for Halloween.
		delete word		Cut out extra extra words.
		insert letter(s)		The leaky faucet dried all night.
		insert word		Oh, my...the most important is missing.
		insert space		There should be space between the words.
		transpose		Switch the letters' order.
		close up space		Delete the empty space inside the word.
		capitalize		I think my keyboard's right shift key is broken.

Proofreading Symbols

		small caps		The paper is due at 11:59 <u>p.m.</u>
		lower case		Charlene visited the State capitol building.
		lower case, all		You've gotta be KIDDING me.
		initial cap only		I love K ENNESAW State University.
		change to italic		Cletus subscribes to Cat Fancy magazine.
		change to roman		He breeds <u>Maine Coon</u> cats.
		boldface		Press the <u>F5</u> key to reload the webpage.
		lightface		They don't need five <u>wet wipes</u>
		wrong font		My cat simply <u>adores</u> me.
		superscript		Journey's Time ³ box set is pretty good.
		subscript		Dihydrogen monoxide is also known as H ₂ O.
		spell out		Michelle owes me seven <u>\$</u>
		ignore the edit		The editor made a mistake while proofreading.

Proofreading Symbols

margin mark	in-text mark		
		period	 Nobody likes Ramsay Bolton 
		comma	 I asked "Why are you picking on Janet?" 
		question mark	 Are you serious? 
		colon	 There's one exit from this room the window. 
		semicolon	 Westley is mostly dead he can't speak. 
		parentheses	 Kennesaw State University KSU is awesome! 
		brackets	 The woman Charlene bought a box of bullets. 
		apostrophe	 You're right about that, I realize now. 
		quotation marks	 Go outside and play! said the boys' mother. 
		hyphen	 That Chevy has a four barrel carburetor. 
		em-dash	 My choice for the job Dave is well-qualified. 
		en-dash	 There were 40-50 people at the party. 

Proofreading Symbols

Spacing and Positioning

margin mark	in-text mark		
		start paragraph	Who ate the pie? In other news, I rock.
		run together	No way. Festus won't do that. Well, he might if you pay him really well.
		justify right	Make this line touch the right margin.
n/a		center	Center things like titles.
n/a		justify left	Why do you keep bugging me about aligning multiple lines of text? I don't wanna do it. I would rather just have a sloppy mess all over the page. You're not the typography police. Go bother somebody else.
n/a		close up vertical space	Rosemary learned how to scuba dive in 2001, and since that time, she's logged over five hundred dives, many of them in the Georgia Aquarium, but she went broke because the aquarium charges \$300 per dive.
		equalize spaces	I don't know how Neil and Chris manage it.
		move word up	Chantel bought two tickets to Iron Maiden.
		move word down	Has that unfortunate rash disappeared yet?
n/a		move text left	Homer Simpson won several prizes at his high school class reunion, but his favorite one was the "Most Improved Odor" trophy.
n/a		move text right	You can use this symbol to indicate that the first line of a paragraph should be indented.

For a downloadable, printable, and accessible PDF of the proofreading marks above, click here: [Proofreading Marks](#)

Special ideas for editing visual materials

Most of the concepts and techniques described in this chapter focus on editing text, but they can also apply to other technical materials. This section will address ideas specific to editing visual elements.

Consider these six concepts when you edit visuals:

Appropriateness

- Decide if text, an image, or a combination of the two is most effective.
- Match the type of image (e.g., table, bar chart, scatterplot, pie chart, Gantt chart, flowchart, map, line drawing, cutaway, cross-section) to the idea/thing being discussed.
- Match the illustration's emotional tone to the subject matter's emotional tone.
- Follow established design conventions.

Clarity

- Use contrasting colors. Bright colors and dark shades attract the most attention.
- Make sure the visual elements' layout follows consistent rules on the screen or page.
- Omit any "non-data pixels" that do not carry information.
- Place an illustration next to the text that references the illustration.
- Explain every illustration's content and relevance in the text, preferably before the illustration appears.
- Label and caption every illustration.
 - Use the correct type of label.
 - Use a sequential numbering pattern.
 - Number tables and figures separately.
- Include "white space" (blank space) around illustrations.

Emphasis

- Use arrows, callouts, and boxes to highlight elements that a user will find important, but don't go overboard.

Ethics

- Avoid images that exclude categories of people or play to stereotypes.
- Avoid inhumane images that downplay effects on people.
- Follow copyright law and create, cite, and/or pay for images.
- Use undistorted images of the actual object.
- Use realistic numbering scales that display quantitative differences in context.

Size

- Strike a balance between making images large enough to see details but not so large as to waste space.
- Minimize images' file sizes, but avoid making the images grainy.

Cost

- Compare the cost of publishing images to your printing budget. Color pixels are free, but color ink is expensive, and projects that require a professional printer can be very expensive.

Special ideas for editing websites

Technical editors are probably not going to code complete websites themselves. Even so, you may be asked to edit and possibly create web-based content, so you need to be familiar with the basics of web technology.

HTML and CSS

Hypertext markup language (HTML) is the backbone of internet content, and Cascading Style Sheets (CSS) are a vital part of how web programmers style that content. In short, HTML tells your browser what to put onscreen, and CSS tells the browser what it should look like.

This chapter cannot go into the details of how HTML and CSS work, but if you intend to edit websites, you need to be able to "read" basic HTML and CSS and understand how they work.

Many online tutorials for HTML and CSS exist; the W3 Schools website (www.w3schools.com) is one of the better ones.

General web design principles

Websites' layout, design, purpose, and function vary tremendously, but most websites follow a set of basic concepts that you can use to evaluate and edit them. Consider these ideas when you edit websites:

- Are words used consistently across the whole website? Are these words meaningful to the users? If not, what words would the readers prefer or understand?
- Are related activities close to each other onscreen and in a logical location? If not, where would the user like to see those activities?
- Do the pages have plenty of headings? If not, where would headings be useful and appropriate?
- Are the sentences and paragraphs short? If not, how and where could you break up long blocks of text into bite-sized chunks?

- Are there any paragraphs that can become lists?
- Are the typefaces and font sizes appropriate for use onscreen? If they're hard to read, how could they be improved?
- Are the hyperlinks easily visible?
- Do the hyperlinks' visible text and mouse-over text describe the items that will open? (In particular, rename links that say "click here.")
- Do the hyperlinks work?
- Do the navigation menus appear in the same place and look the same on every page?
- Do the navigation menus work?
- Does the website include a sitemap?
- Does the website have an internal search engine? Does it work?
- Is the website usable on a mobile device?
- Does the onscreen layout follow an F-pattern? (Most people read websites in this pattern: they look across the top, scan down the left side a few inches, read across, and scan down again.)
- How long would it take for a user to realize s/he ran into a problem?
- Can the user start over if a problem occurs?

Accessibility

One editing issue that you need to consider very carefully is website accessibility. Some issues with accessibility deal with physical or mental disabilities, while others deal with limits on users' expertise and access to technology.

A federal law called Section 508 requires all government agencies that receive federal funding to make their electronic and information technology accessible to people with disabilities. Government agencies also want to make their websites usable for people with limited resources.

Similarly, corporations want to make their websites accessible to the widest possible variety of customers, so corporate websites should incorporate accessibility standards to accommodate these broad audiences.

As a technical editor, you may be responsible for evaluating a website's accessibility. Consider these ideas when you edit websites:

- Is the website usable by people with physical or mental disabilities? Examples include people who are
 - partially or completely blind
 - colorblind
 - unable to focus their eyes well
 - unable to see contrast
 - partially or completely deaf
 - easily distracted by noise
 - unable to use a mouse accurately, or at all
 - unable to use two hands
 - unable to tolerate blinking lights
 - dyslexic
 - unable to form short-term memories
 - unable to concentrate for long periods of time

Many of these users depend on assistive technologies such as screen readers and alternative keyboards. If the website does not work with these technologies, you should edit the website to make it accessible.

- Is the website usable by people who have limited experience with computers? Examples include
 - senior citizens
 - people from rural areas
 - people in developing countries
- Is the website used by people with limited or modified technological resources? Examples include people who have
 - dial-up internet connections
 - older computers
 - small or non-widescreen monitors
 - lack of access to computers other than mobile devices
 - lack of access to mobile devices
 - no software to open downloaded files
 - older web browsers
 - text-only browsers

- disabled speakers
- disabled cookies
- disabled Javascript
- ad-blocker programs
- pop-up blockers

A detailed discussion of accessibility issues and goals is available online through the Web Accessibility Initiative section of the World Wide Web Consortium (W3C) website: www.w3.org/WAI/

The W3C also hosts a page with an extensive and frequently updated list of accessibility checkers. You may wish to use them when editing a website for accessibility: <http://www.w3.org/WAI/eval/Overview.html>

Website markup strategies

You have multiple options for how to mark up websites. None are innately better than the others, so choose the method(s) that best fits the project and your client's needs.

- Edit a website's unpublished text in a word processor as you would any other text document.
- Copy-and-paste a published website's text to a word processor, and edit it as you would any other text document.
- Capture and print screenshots, or print formatted web pages with your browser's "Print" function, then mark them up as you would any other hard copy documents.
- Capture screenshots, open them with a graphics program such as Photoshop or MS Paint, and mark them up with the program's drawing and/or text-creating tools.
- Export website pages to PDF and edit them with Acrobat or Acrobat Reader markup tools.
- Type a separate comments file.
- Directly edit the HTML and CSS code.
 - Use either a web-development program or a plain-text editor. *Never* use MS Word.
 - Tag your edits with highlighting, colored text, and/or comment codes (`<!-- commentgoeshere -->` for HTML, and `/** commentgoeshere */` for CSS).
- Export the website's code or text to a collaborative online space such as a wiki or Google Docs, and edit it online, using the program's tools.